

PROCEEDINGS

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SOME UNDESCRIPTED NORTH AMERICAN SAPROMYZIDÆ.

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In working over the material belonging to the Sapromyzidæ contained in the collection of the Illinois State Laboratory of Natural History I found a few species that are evidently undescribed, and herewith present descriptions of these forms, along with descriptions of those to which they are most closely allied.

It is very probable that some of the species now described are represented in other collections, as the characters for their differentiation are very readily overlooked, and they may readily find a place along with examples of the old species unless carefully examined.

In the case of *Lonchaea vibrissata* there is met with an instance of an apparently aberrant form which, provided one considered the bristle as a vibrissa, can not be placed in its proper family by the synoptic keys in use for this group. I am not, however, prepared to consider the strong bristle as the vibrissa, as it does not occupy the same position on the vibrissal angle as in the case of those species possessing true vibrissæ. This species is in other respects a true *Lonchaea* and may conveniently be retained within the limits of that genus.

I have to thank Dr. S. A. Forbes for permission to publish this paper, and Mr. W. L. McAtee of the Bureau of Biological Survey for the opportunity of comparing his material with that in the collection of the Illinois State Laboratory of Natural History. Unless otherwise stated types are in the latter collection.

***Sapromyza similata* sp. nov. and *S. compedita* Loew.**

S. similata may be characterized as follows:

Male.—Yellow subopaque; only the second joint of hind tarsus and apices of the last three hind tarsal joints black. Wings with cross veins distinctly and broadly infuscated, a fuscous spot at end of marginal cell, which is generally connected with a spot below it on the third vein, and another spot of same color at apex at third vein, the spot on middle of last section of third vein is always separated from the spot enclosing the outer cross vein and distinctly nearer to the wing tip.

The arista is very indistinctly pubescent; the mesonotum has 4 dorso-central bristles, the anterior one very weak, and situated just in front of suture; the forwardly-directed ventral appendages of the hypopygium have a very distinct rounded incision at about their middle which, when they lie together, presents a large rounded opening, and the hairs at apices of these organs are of irregular lengths, one of them being especially long; the hind tarsus is elongated, the basal joint slender, the second joint flattened, but distinctly longer than broad, the apices of the next three joints distinctly over half as broad as the apex of the second (Fig. 4); hind tibia slightly thickened and without any noticeable ventral hairing; last section of fourth vein distinctly longer than the penultimate section (Fig. 2).

Female.—Similar to the male in color and chaetotaxy. The hind tarsus has the second joint very little thickened. (Figs. 2, 4, and 17 illustrate *similata*.)

In *Sapromyza compedita* Loew the male is similar in color and in the number of wing marks to the above, but the spots in marginal and submarginal cells are more distinctly coalescent and are almost invariably connected with the cloud on the posterior transverse vein.

The arista is distinctly haired; the mesonotum has normally only three pairs of dorsal-centrals, the anterior weak pair of *similata* being absent; the ventral organs of hypopygium have a much smaller internal excision, causing the opening, when they lie together, to be very small in comparison with that in the previous species, and the apical hairs on those organs are less conspicuously irregular than in that species; the second joint of the hind tarsus is very much flattened, almost disc-like, and as broad as long, the apices of the remaining joints of hind tarsus are not nearly half as broad as apex of second (Fig. 5); hind tibia with several loose, soft hairs on the apical fourth of the ventral surface; last section of fourth vein equal to, or slightly shorter than, penultimate section. (Fig. 6.)

Female.—Similar to male in color and chaetotaxy. The hind tibia is devoid of the ventral hairs, and the second joint of the hind tarsus is barely broader than the next joint. (Figs. 5 and 6 illustrate *compedita* Loew.) These species are very close to each other, but may be readily separated by the characters given in the above summary.

I have before me nine specimens of *similata* from Algonquin, Illinois (Nason); one female (the type), St. Joseph, Illinois; one female, Quincy, Illinois, swept on sand bar, August 12, 1889 (C. A. Hart); one male, Michigan; one female, Merchantville, New Jersey; one female, swept

from weeds, Normal, Illinois, June 3, 1884; and one female, Pond Grove, Urbana, Illinois, June 13, 1889 (C. A. Hart). Type in Illinois State Laboratory of Natural History. Fourteen paratypes in collection of W. L. McAtee from the following localities: Washington, D. C., May, June, and July; Plummers Island, Maryland, July 21, and Asheville, North Carolina, June 26.

S. compedita is represented in the same collections by four specimens, three females and one male, from Illinois, and one specimen from Great Falls, Virginia, June 30, and another from Maryland, near Plummers Island, June 6.

Sapromyza bispina Loew, *et al.*

In the genus *Sapromyza*, as in most other genera, there are several species which are very inconspicuously marked, do not lend themselves readily to classification, and the characters for the differentiation of which are very minute or obscure. The earlier workers generally refrained from dealing with such species, or if they did notice them, it was either to associate them with previously described forms of similar general appearance, or else to describe them in such a vague manner that it is almost impossible to decide just what species was before them unless by examination of the type. It is to such an obscure section of *Sapromyza* that *bispina* Lw. belongs, and when engaged in identifying the material in the collection of the Illinois State Laboratory of Natural History, I have had to separate the species belonging to this group from *bispina* Lw., and *tenuispina* Lw. In the belief that it may prove useful to workers on this genus I herewith present, with the description of some new species, a comparative table for their separation. The species included all have the wings unmarked, the cross veins alone being occasionally slightly blackened, though the membrane of the wing adjoining these veins is never infuscated. The face, mesonotum, pleurae, scutellum, abdomen, and legs are also without black marks, in the form either of spots, bands, or stripes. In making an examination of the wing for markings it is better to use a low power hand lens, as then there is no chance of mistaking the blacker cross vein for the spot-like infuscation which is present *Sapromyza (Minettia) nubila* Melander.

1. Mesonotum in both sexes grayish on disc; cheeks without any hairs, 4 very strong dorso-centrals present; 2 rows of strong acrostichals; arista short-haired; abdomen in both sexes shorter than thorax; in the ♂ distinctly tapering toward the apex, keel-shaped, its height as great as its breadth at base on dorsum, in ♀ broad to end of 6th segment, the 7th abruptly contracted, projecting cone-like, from the 6th; legs stout; mid tibia with 3-4 well developed apical spurs; hind femur in ♂ with 3-4 in ♀ with two bristles at apical third on antero-ventral surface; hind tibia normal *harti*, new species.

Mesonotum yellow in both sexes, very rarely with a slightly grayish or brownish tinge in ♀ ; cheek generally with microscopic hairs on margin ; abdomen not, or slightly tapering, never keel-shaped in ♂ ; in ♀ the abdomen tapers gradually to apex of the 7th segment, not suddenly constricted ; legs normal	2
2. Hind tibia of ♂ with distinct, moderately long, soft hairs, on at least the basal third of the antero-ventral surface	3
Hind tibia without such hairs	5
3. Hind tibia ciliated on almost its entire length ; prolongation of last ventral abdominal segment short <i>cilifera</i> , new species.	
Ciliation of hind tibia confined to basal half	4
4. Last dorsal abdominal segment with numerous, black setulae, which form a noticeable group on lateral margin at apex ; process on last ventral segment short <i>seticauda</i> , new species.	
Last dorsal segment without the conspicuous group of setulae ; ventral process long	<i>bispina</i> Lw.
5. Male with the 6th dorsal segment of abdomen very much longer than 5th	<i>inaequalis</i> , new species.
Male with 5th and 6th abdominal segments subequal	6
6. Male with a row of moderately long hairs on the postero-ventral surface of hind femur ; ventral abdominal process very long and slender	<i>tenuispina</i> Lw.
No long hairs on postero-ventral surface of hind femur	
	<i>aequalis</i> , new species.

I have not included in the table the females of several of the species as I have but the male of *aequalis*, and the others present but few characters that would permit of their tabulation. If the absence of the preapical bristle from the hind femur is a constant character, as I believe it to be, in *inaequalis* it should be easy for one to recognize the female of this species, but the others are very closely allied and are very difficult to separate without the presence of males.

Sapromyza harti sp. nov.

(Figs. 3, 7, 8, and 14.)

Male.—Subopaque, yellow, thorax including pleurae, with a grayish or brownish tinge and distinct grayish pollinosity. Abdomen sometimes brownish dorsally. Legs entirely yellow. Wings clear, veins yellow, the outer cross vein slightly more distinct than the others. All parts of the head, except arista, yellow ; arista brown. Halteres yellow. All bristles black.

Frons slightly buccate, almost one-half the head width ; all frontal bristles strong ; post-vertical pair widely separated ; about equal in length to the anterior orbital pair ; profile of head as shown in Fig. 3 ; arista pubescent ; cheeks bare. Mesonotum with 4 pairs of very strong dorsal-centrals, the anterior hardly weaker than the prescutellar pair ; 2 rows of short but strong acrostichals present, disc of scutellum bare ; pleural bristles normal, very strong, the usual hairs very sparse and indistinct

on mesopleura and sternopleura. Abdomen shorter than thorax, distinctly tapering posteriorly and keel-shaped (Fig. 8); the bristles conspicuous on posterior margins of segments. Legs stout; all tibiae with strong preapical bristles, mid pair with 3-4 distinct apical spurs; hind femur with a series of bristles on apical third of antero-ventral surface (Fig. 14); hind tibia without any noticeable hairing on ventral surface. Wing with veins 3 and 4 parallel apically; last section of fourth about $1\frac{1}{2}$ times as long as penultimate section; outer cross vein oblique, its upper extremity nearer to wing tip than its lower. Length, 3.75-4.5 mm.

Female.—Similar in size and coloration to the male. The abdomen is figured on the plate, Fig. 7. The hind femur has usually only two bristles in place of the graduated row present in the male.

Locality.—Quincy, Illinois, August 12, 1889; swept on sand bar (C. A. Hart). Paratypes and Allotypes: Same locality, August 14, 1889. Named in honor of Mr. C. A. Hart who collected the species.

***Sapromyza cilifera* sp. nov.**

(Fig. 15.)

Male.—Entirely yellow, shining, only the head parts opaque. Wing clear, veins yellow; outer cross veins hardly more distinct than other veins, arista brown. Dorsum of abdomen slightly discolored, but probably normally yellow.

Frons about two-fifths the head width, bristling normal; head in profile almost as in *similata*, the anterior bristle not so far forward; arista long haired, but not plumose, the longest hairs being equal to rather less than half the width of the third antennal joint; marginal hairs on cheeks distinct; cheek as in *similata*. Mesonotum with 4 pairs of dorso-centrals, the anterior pair strong and well in front of suture; 2 rows of acrostichals present, the anterior 2-3 pairs weak; scutellum and pleura as in *harti* except that the bristles are rather weaker. Abdomen slightly longer than thorax; hypopygium very large and knob-like, in type specimen almost as long as remainder of abdomen; abdominal segments subequal; apical bristles moderately strong on the last 3 segments, weak on the anterior 3; surface of dorsal plate of hypopygium bare on the basal half; scattered hairs present on apical half; the hairs are much longer on the plate which forms the apical portion of the reversed surface of hypopygium; last ventral segment of abdomen with the lateral projections much the same shape as in *tenuispina* but much shorter; the rounded ventral lamellae of the hypopygium almost bare. Hind femur, on the postero-ventral surface, with a row of long, soft hairs of irregular length and not regularly arranged, one of which, near base, is most conspicuous; hind tibia as in Fig. 15; all tibiae with preapical bristle. Wings rather long and narrow; last sections of veins 3-4 subparallel; last section of fourth vein about $1\frac{1}{4}$ times as long as the penultimate section. Length, 3.5 mm.

Type.—Urbana, Illinois. swept from box elder, May 24, 1888 (C. A. Hart). I have not seen a female of this species, which is represented in the Illinois State Laboratory of Natural History by the type specimen only.

Sapromyza seticauda sp. nov.
(Figs. 8, 12, and 13.)

Male.—Yellow; head parts opaque, thorax and abdomen subopaque, the former lightly gray dusted. Wings clear, veins yellow. All bristles black.

Frontal bristles strong, normal in number, ocellar region with 2-3 pairs of short setulae in addition to the ocellar bristles; arista yellow at base, brownish beyond, distinctly haired, the longest hairs are about equal in length to one-third the breadth of third antennal joint; profile of head very similar to that of *inaequalis* (Fig. 16) but the cheeks are not as strongly haired. Mesonotum strongly haired, 4 pairs of strong dorso-centrals present; 2 rows of aerostichals, which are very close placed serially and increase rapidly in strength from in front; besides the aerostichal rows there are several irregularly arranged hairs between the dorso-centrals and the aerostichals; plenrae with the normal bristles; disc of scutellum bare, apical bristles eruciate. Abdomen equal in length to thorax; base broad, gradually tapering from middle, lateral view as in Fig. 9, the 7th segment very conspicuously setulose laterally; the ventral organs are exposed in the type, as drawn, but this is not the normal condition of the hypopygium, those organs generally lying close up against the ventral surface so that it is impossible to discover their true form without relaxing the specimen. Legs rather strongly bristled, but the bristles occupying only the usual area, *i. e.* the postero-dorsal and postero-ventral surfaces of fore femur, the anterior surface, apical half, of mid femur, and the single preapical antero-ventral bristle on hind femur; all tibiae with preapical bristle; postero-ventral surface of hind femur with scattered, rather long, weak hairs, the most conspicuous one being near apex, hind tibia with a series of long hairs on basal third. Wing as shown in Fig. 12. Length, 3.5 mm.

Type.—Havana, Illinois, July 14, 1910.

Female.—Similar to the male in size and coloration. Differing in shape, etc., of abdomen, which is broad at base and tapers very much posteriorly, 6th segment short; apices of all segments with black bristles. Legs with the same bristles as in the male, but the soft hairs are absent from both the hind femur and hind tibia. The thoracic chaetotaxy is similar to that of the male.

Allotype.—Same data as type. Type and allotype in Illinois State Laboratory of Natural History.

Sapromyza bispina Loew.
(Fig. 11.)

Syn: *Sapromyza bispina* Loew, Dipt. Amer. Sept., Indig: Cent., 1, 1861, species 79.

This species differs from the foregoing in being much more slender; the abdomen is distinctly longer than the thorax; the hypopygium is very large and knob-like, and there is no conspicuous group of setulae as in *seticauda*; the hind femur has soft hairs on the antero-ventral surface

which increase in length and strength to just before the preapical bristle, where the last one is almost bristle like; postero-ventral surface bare except at base; hind tibia as in *seticauda*.

The thoracic chaetotaxy is as in *seticauda*. The cheek is distinctly higher than in the preceding species, being almost half as high as the eye; the bristling of frons is the same in both species, but rather stronger in *bispina*. The female of this species may be separated from that of *seticauda* by the higher cheek, which in the latter is barely one-third the eye height; its more obscure brownish yellow color; the longer sixth abdominal segment, which is about as long as the fifth, and its rather larger size. Length, 3.75-4.5 mm.

In the Illinois State Laboratory of Natural History there are specimens from the following Illinois localities: White Heath; St. Joseph; Algonquin; Champaign; Quincy; and Urbana.

Melander in his recent synopsis of this family suggests the probability of *connexa* Say, being the female of this species, but the acceptance of this synonymy is not desirable, because of the number of species to which Say's description would apply more or less fittingly, unless one is particularly anxious to preserve Say's name. There is a female in the material here named by Coquillett as *connexa* Say which is undoubtedly *bispina* Loew.

***Sapromyza inaequalis* sp. nov.**

(Fig. 16.)

Male.—Reddish yellow, slightly shining, head parts opaque. Arista brown, yellow at base. Wings clear, veins yellow, the cross vein being slightly more distinct than the other veins. All bristles black.

Profile of head as shown in Fig. 16; arista very short haired; hairs on occiput and cheeks more distinct than usual. Arista pubescent. Mesonotum with 4 pairs of dorso-central bristles, the front pair strong; aero-stichals moderately strong and close serially, between the rows and the dorso-centrals there are a few scattered hairs; bristling of pleurae and sentellum normal. Abdomen longer than thorax, broad at base, slightly tapering to apex; sixth segment very distinctly elongated, in type equal in length to the 3 preceding segments; apices of all segments with distinct bristles; hypopygium large, projecting slightly less than length of sixth segment, surface with numerous hairs; last ventral segment with lateral processes as in *bispina* but not so long nor broad; the protruding recurred process small, weakly haired. Legs normal in shape; all tibiae with preapical bristle; hind femur without any preapical postero-ventral bristle; hind tibiae not noticeably haired; surfaces of legs with the small hairs rather distinct. Wing venation as shown in Fig. 12. Length, 3 mm.

Type.—Urbana, Illinois, May 9, 1891 (C. A. Hart).

Female.—Similar to male in color and chaetotaxy. The abdomen is broadly ovate, the segments slightly decreasing in length to apex, the apical one rather longer than subapical; all segments with distinct apical bristles. Hind femur without preapical bristle, as in male.

Allotype.—Urbana, Illinois, May 27, 1890 (C. A. Hart).

I believe from the condition of the specimens before me that the pre-apical bristle is normally absent from the hind femur.

Sapromyza tenuispina Loew.

(Fig. 10.)

Syn: *Sapromyza tenuispina* Loew, Dipt., Amer. Sept. Indig: Cent. I, 1861, species 80.

Male.—Differs from *bispina* Loew, as follows:

Hind femur with moderately long, irregular hairs on the entire length of its postero-ventral surface, the antero-ventral surface with only very short hairs in addition to the preapical bristle; hind tibia without loose ventral hairs; abdomen much as in *bispina* but the last ventral segment shaped as in Fig. 10. In other respects similar to *bispina*.

Female.—Similar to the female of *bispina* except that it is rather more slender and the disc of the mesonotum is not inclined to grayish or brownish and is distinctly shining.

Represented in the material before me by one male and four females, Odin, Illinois, May 20, 1910, in a meadow (C. A. Hart); one female, White Heath, Illinois, May 18, 1889, in a wood (Marten).

Although Loew states that the cross veins are not blackened I find that the specimens above mentioned are just as distinctly marked in this respect as those belonging to *bispina*. I believe, however, that there can be no mistake as to the identity of the above form with Loew's species because of the very peculiar character of the ventral processes.

Sapromyza aequalis sp. nov.

Male.—Similar to *tenuispina* Loew, except that the anterior pair of dorso-centrals are weak; the ventral abdominal process is rather shorter, and the hind femur has no hairs on the postero-dorsal surface, these being confined to the apical half of the antero-ventral surface, and very inconspicuous. In all other respects very similar to the foregoing species. Length, 3.75 mm.

Type.—Algonquin, Illinois, August 8, 1895 (Nason).

With the type there is another specimen which may possibly represent another species. It has only three pairs of dorso-centrals, but owing to the fact that the anterior pair in the type are considerably reduced in size, and that the second specimen is not in very good condition, I prefer to leave the specimen as possibly identical with the one from Algonquin. Locality of second specimen, Urbana, Illinois, June 28, 1889 (C. A. Hart).

Sapromyza incerta sp. nov.

This species is almost identical in color and general appearance with *philadelphica* Macquart but may be separated from the latter by the following characters: The mesonotum has only three pairs of strong dorso-centrals, and in front of the suture one very strong pair of bristles which may be mistaken for the anterior pair of dorso-centrals, but which are

on almost the exact line of the much weaker aerostichals, posteriorly the aerostichals are much weaker than this pair, and anteriorly the aerostichals are weak hairs; in *philadelphica* the dorso-centrals are four in number, the anterior pair being in front of suture and slightly more widely separated than the posterior pairs, while the aerostichals are carried forward to at least the transverse line of the anterior pair of dorso-centrals at almost the same strength on their whole extent, anterior to this part they are represented by weak hairs. This difference holds good for both sexes. The genitalia of the males present minor differences which support the evidence of the thoracic chaetotaxy. I have not sufficient material to permit of the dissection of those organs at present before me, but an examination of the type specimen of *incerta* the outer lamella shows that the lower arm is slender and directed downward on the apical half, whereas in *philadelphica* this arm is considerably thicker, somewhat spatulate at the tip and but little deflected; the central lobe-like processes in *incerta* are rather smaller than in *philadelphica* and rather shorter haired. The legs are similar in the species, and the wings in both are marked as in *similata*.

Locality.—Plummers Island, Maryland, August, 1912. Three females, including type.

Allotype.—Washington, D. C., September 2, 1907. One male.

In collection of W. L. McAtee.

There are two examples, a male and a female, in the collection of the Illinois State Laboratory of Natural History, the male from Urbana, Illinois, September 15, 1891 (Marten), and the female from Aldridge, Illinois, August, 1891 (Hart and Shiga).

Lonchaea vibrissata sp. nov.

(Fig. 1.)

Female.—Glossy blue-black. Antennae brownish black, surface of third joint with a whitish bloom; face distinctly white pollinose; palpi black. Mesonotum and abdomen without traces of pollen. Legs black, basal two joints of all tarsi bright fulvous. Calyptae yellow, fringe brownish. Wings clear, veins yellowish. Halteres black, stalk yellow.

Frons occupying about one-third the width of head, slightly wider at center than at vertex or anterior margin; bristling normal, surface hairs weak; from above middle the surface is pitted with large irregular punctures which extend to the surface of the lunule; antennae reaching barely to the epistome, rather short, third joint less than twice as long as its greatest breadth; arista bare; cheek narrow, the glossy lower posterior part with numerous short hairs, and near to the anterior margin one strong, up-turned bristle. Thorax haired as in *polita* Say. Abdomen with seven distinct segments. Wing veins 3 and 4 slightly convergent at apices; last section of fourth vein longer than penultimate section (3.2), outer cross vein about two-thirds as long as section of 4 anterior to it. Length, 2.5-3 mm.

Locality.—Algonquin, Illinois, October 16, 1894 (Dr. Nason). Para-

type: May 10, 1897, same locality and collector. Type and paratype: Illinois State Laboratory of Natural History.

Lonchaea winnemanae sp. nov.

(Fig. 18.)

Male.—Glossy blackish-blue. Frons black, subopaque, the upper portion of the orbits, to just below the orbital bristle, polished blackish-blue. Antennae black, the base of third joint on inner surface brown black; face slightly grayish pollinose; proboscis and palpi black. Halteres black. Squamae white, fringe concolorous. Legs shining black; tarsi yellow, last three joints blackened. Wings clear, veins yellowish brown, fifth vein most distinct.

Frons about one-fourth the head width, slightly converging to lunule, surface with distinct hairs, those on the lateral margins more than half as long as width of frons; face retreating slightly, not keeled; antennae elongated the third joint reaching to epistome, tapering slightly on apical half, about 3 times as long as broad at broadest part; arista but little swollen at base, tapering, almost bare, cheek small, marginal hairs becoming longer anteriorly, the longest one setulose, upcurved, above the longest one there are several weaker hairs, palpi normal, short haired, mesonotum with the discal hairs long and numerous; bristling as in *polita* Say; mesopleura with the same bristles as in *polita* but the surface hairs longer. Abdomen short and broad, ovate, in type the breadth slightly exceeding the length; surface haired as in *polita*. Legs hairy; hind femora with a row of bristles on the antero-ventral surface, which are very short, hair-like, and closely placed to middle, and from that point represented by about 6 bristles, the first of which is about the length of the femoral diameter, the third one becoming suddenly longer and stronger, about $1\frac{1}{2}$ times as long as diameter of femur, and the other three tapering to the apical one which is subequal in length with the first. Venation almost identical with that of *polita*. Length, 4.5 mm.

Locality.—Virginia shore of the Potomac River near Plummers Island, Maryland, April 18, 1909 (W. L. McAtee).

Allotype.—Algonquin, Illinois, May 23, 1895 (W. A. Nason).

Lonchaea nudifemorata sp. nov.

(Fig. 19.)

Male.—Glossy blue-black, the abdomen less distinctly bluish than the thorax. Frons opaque black, orbits to just below the orbital bristle, and ocellar triangle blue-black, glossy; base of third antennal joint on the inner side yellowish, otherwise the antennae are black; palpi and proboscis black, the latter brownish at apex. Pleurae glossy, metallic blue-black on central portions, brown black above coxae and posteriorly. Legs shining, black; tarsi yellow, apical 3 joints of fore pair, and apical 2 joints of middle and hind pairs browned. Squamae whitish yellow, fringe concolorous. Halteres entirely black. Wings clear, veins yellowish brown.

Frons distinctly narrowed anteriorly, at its narrowest part about one-seventh the width of head; frontal hairs neither long nor numerous; antennae reaching to epistome, third joint almost parallel-sided, the apex slightly rounded, its length about $2\frac{1}{2}$ times its greatest width; apical dorsal bristle on second joint distinct and rather long, its length equal to breadth of third antennal joint; cheek linear, the marginal bristles rather numerous, upturned anteriorly, and arranged in an irregular row; palpi slightly broadened, with scattered hairs on surface. The mesonotum has the bristling as in *polita* but the hairs on disc are very closely placed and their length is about equal to that of the dorsal hair on second antennal joint or slightly longer. Abdomen very short and broad, not exceeding in length that of the thorax, broad to apex of fourth segment, the fifth rather abruptly tapering; surface of all segments with numerous hairs; the ventral, protuberant portions of the hypopygium are yellowish. Legs rather strong; fore femora with strong ventral bristles, mid femora more weakly bristled, the bristles strongest on the postero-ventral surfaces; hind femora bare on both the antero- and postero-ventral surfaces, all legs with short surface hairs. Outer cross vein of wing slightly waved; third vein at its apex slightly upcurved; otherwise the wing venation is similar to that of *polita*. Length, 5 mm.

Locality.—Plummers Island, Maryland, April 21, 1912 (W. L. McAtee), one specimen.

This species differs from *polita* Say, which it most closely resembles, in having the hind femora bare on the antero-ventral surface, except for some very short setulae at near apex; the broader third antennal joint; the slightly sinuous outer cross vein and the more robust build of the insect over all.

There are 2 females in the Illinois State Laboratory of Natural History collection which I consider belong to this species.

These differ from the male only in having the eyes much more widely separated, at the anterior, or lower margin; the width of frons is about equal to two-thirds that of either eye at same part; the base and almost the entire under surface of third antennal joint is yellowish; and the wings are distinctly yellowish, with all the veins deep yellow.

The type specimens of *winnemanae* and *nudifemorata* are in the collection of W. L. McAtee and the allotypes are in the collection of the Illinois State Laboratory of Natural History.

Lonchaea albiceps sp. nov.

Female.—Glossy black, with but slight indications of a bluish tinge, except on the frons which is distinctly bluish when viewed from above and behind. The face and its sides, when viewed from above, with very distinct white pollinosity; antennae black, arista concolorous; proboscis and palpi black. Legs black, basal tarsal joint on all legs yellowish, the remainder of tarsi blackened. Squamae black-brown, fringe concolorous. Halteres black. Wings very slightly grayish, veins yellowish brown.

Frons one-third as wide as head, slightly wider at above antennae than

at vertex; orbits not differentiated from central stripe at any part, the single orbital bristle rather weak, and but little anterior to the transverse line of the anterior ocellus; surface of frons almost bare, a short, uniserial row of hairs on lower part of frons close to eye margin; at middle of frons, in type specimen, there is a transverse depression, which is carried down to some extent on either side, giving the frons a rather distinct concavity; lunule rather small, arched; face broad, the eye margins sloping away very rapidly, so that at the lower margin of eye the face is twice as broad as at lower margin of frons; antennae short, falling but little short of epistome, third joint slightly longer than broad, rounded at apex, arista bare, slightly swollen, and geniculated at base, its length equal to anterior width of frons, cheek about one-fourth the height of eye, margin with short hairs, and a distinct bristle very similar to that which occurs in *vibrissata*, palpi slightly spatulate. Mesonotum with the discal hairs comparatively rather short and sparse, the anterior pair of dorso-centrals much reduced in size; scutellum with the basal pair of bristles placed well back from the lateral margins, no hairs on scutellum besides the bristles. The ovipositor ends in an acute point, without the preapical constriction as in *polita* Say. Fore and mid femora with bristles on the ventral surfaces, which are not very strong, the hind pair without bristles; tarsi not particularly thickened. Last section of vein 4 about $1\frac{3}{4}$ times as long as penultimate section; inner cross vein at beyond end of auxiliary vein; outer cross vein slightly waved; last sections of veins 3 and 4 slightly convergent. Length, 2.75 mm. (exclusive of ovipositor).

Locality.—Washington, D. C., May 29, 1912 (W. L. McAtee). One specimen.

Type in collection of W. L. McAtee.

This may be the species Melander lists in his paper on the family* as *parvicornis* Zett., but I consider that it is not identical with the European form and even if I were mistaken as to this the name *parvicornis* is not tenable, so that the name here given will have to be adopted for our American species.

***Lonchaea quadrisetosa* sp. nov.**

Female.—Glossy black. Frons slightly shining; orbits to just below the orbital bristle, and the ocellar region glossy; antennae brown-black, arista concolorous; face and lunule viewed from above with whitish pollinosity; palpi and proboscis black. Mesonotum, scutellum and pleurae glossy black. Abdomen glossy black, without distinct pollinosity. Legs glossy black, the tarsi opaque, brown black, but not at any part yellow. Squamae and their fringes deep brown. Halteres black. Wings slightly smoky, veins brown. All hairs and bristles black.

Frons parallel-sided, one-third the width of head, surface covered with distinct sparsely scattered hairs; orbital bristle strong; bristle on dorsal surface at apex of second antennal joint as long as breadth of third joint, hair-like; third joint about $1\frac{1}{2}$ times as long as broad, reaching three-fourths

* *Psyche*, Vol. 20, 1913, p. 57.

the length to mouth margin; arista distinctly longer than anterior width of frons, very shortly pubescent; face short, the upper margin of basal joint of antenna at middle of profile; face twice as wide at lower margin of eye as at base of antennae, the eye margins sloping back very abruptly; cheek with a row of bristles beginning near eye margin posteriorly and running diagonally downward to anterior angle, the last 4 bristles very strong, cheek glossy at base of bristles; below the level of this row of bristles there are numerous short hairs and several stronger bristles; palpi normal. Mesonotum rather long haired on disc; pleural bristles very strong; scutellum bare except for 4 subequal marginal bristles. Abdomen broadly ovate; ovipositor in type specimen not exerted far enough to show its structure, but the apex is sharp. Legs strong; fore and mid femora with rather strong ventral bristles, the hind pair without strong bristles. Last section of fourth vein about $1\frac{1}{3}$ times as long as penultimate section; outer cross vein slightly sinuate; inner cross vein at below end of first vein; last sections of veins 3 and 4 slightly convergent. Length, 3.5 mm.

Locality.—Plummers Island, Maryland. August 14, 1912 (W. L. McAtee).

This species is most closely allied to *deutschi* Zetterstedt, but that species is but slightly shining, and the abdomen opaque black, through the presence of distinct pollinosity. The cheek in *deutschi* is also said to be linear and no mention is made by Becker of the presence of strong bristles which are a feature in the present species. Melander records *deutschi* from Alaska and Washington. I have not seen American examples of the latter.

Type in collection of W. L. McAtee.